

REMARKS

This application has been reviewed in light of the Final Office Action dated September 17, 2003. In view of the foregoing amendments and the following remarks, favorable reconsideration and withdrawal of the objection and rejections set forth in the Office Action are respectfully requested.

Claims 11-18 are pending. Claims 16-18 have been withdrawn as being drawn to a non-elected invention. Claims 1-10 have been canceled without prejudice or disclaimer of subject matter. Claim 11 has been amended. Of the claims presented for examination, Claim 11 is in independent form.

In accordance with the Examiner's request, Claims 1-10, directed to a non-elected invention, have been canceled. However, Claims 16-18, directed to a non-elected species, have not been canceled. Applicants submit that cancellation of those claims is not appropriate and should not be required because those claims could be rejoined upon allowance of a generic claim.

The title of the invention was objected to for not being descriptive. The title has been amended as suggested by the Examiner. Withdrawal of this objection is respectfully requested.

Claims 11-15 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 11 has been amended, with attention to the point raised by the Examiner. Withdrawal of this rejection is respectfully requested.

Claims 11-13 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,838,351 (*Weber*), and Claims 14 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Weber* in view of U.S. Patent No. 5,262,000 (*Welbourn et al.*)

and EP 0 737 582, respectively. Without conceding the propriety of those rejections, and solely to advance prosecution, Claim 11 has been amended.

Independent Claim 11 is directed to a method of manufacturing a liquid discharge head comprising, *inter alia*, a movable member. The method comprises the steps of forming a shape of the movable member on a device substrate by a dry etching method, and removing a right-angled part and an acute-angled part of an edge of the movable member.

By virtue of these features of the invention as set forth in Claim 11, the shape of the movable member can be formed accurately and a stress concentration can be relieved upon displacement of the moveable member, thereby improving the durability of the movable member.

Weber is directed to a valve assembly for controlling fluid flow within an ink-jet pen. However, Applicants submit that nothing in *Weber* would teach or suggest forming a shape of a movable member on a device substrate by a dry etching method.

Further, Applicants submit that nothing in *Weber* would teach or suggest removing a right-angled part and an acute-angled part of an edge of the movable member, as explained presently.

Applicants note that the portions of layers 144, 172 and 176 that are removed, as shown in Figs. 7B (element 172), 7D (element 144) and 7E (element 176), are not portions of an edge of a movable member. Rather, they are portions of layers 144, 172 and 176, which originally extended all the way across substrate 158 (i.e., to the left side of the page), as shown in Figs. 7A, 7C and 7E. These portions that are removed were not part of valve 132.

Further, the portion of layer 144 that is removed is not a right-angled part of an edge of a movable member. Rather, as shown in Fig. 7D, the portion of layer 144 that is

removed includes a 180°-angled part with respect to the remaining portion of layer 172 (the remaining portion of layer 172 will later become part of valve 132). In addition, a bottom part of the portion of layer 144 that is removed forms a right angle between substrate 158 and sacrificial layer 164 (sacrificial layer 164 being later removed to form a gap between valve 132 and substrate 158). This right-angled portion is not a right-angled part of an edge of a movable member.

Further, the portions of layers 172 and 176 that are removed are not acute-angled parts of an edge of a movable member. Rather, as shown in Fig. 7B, the portion of layer 172 that is removed includes a 180°-angled part with respect to the sacrificial layer 164 and an obtuse-angled part on the upper side of layer 172, which is not in contact with other elements. The portion of layer 176 that is removed is not even illustrated in the figures. However, judging from the state of layer 176 after removal of the portion, as shown in Fig. 7E, it might be inferred that the portion of 176 that was removed included a 180°-angled part with respect to the remaining portion of layer 144 (the remaining portion of layer 144 will later become part of valve 132) and an obtuse-angled part on the upper side of layer 176, which was not in contact with other elements.

For at least the reasons given above, Applicants submit that *Weber* does not contain all of the elements of independent Claim 11. Accordingly, that claim is believed allowable over that reference.

Applicants submit that nothing in *Welbourn et al.* or EP 0 737 582 would remedy the deficiencies of *Weber* discussed above.

Since none of the cited art, whether taken singly or in the cited combinations (even assuming, for the sake of argument, that such combination were permissible), would teach or suggest all of the elements of independent Claim 11, that claim is believed allowable over the cited art.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against independent Claim 11. That claim is therefore believed patentable over the art of record.

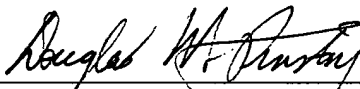
The other claims presented for examination are each dependent from independent Claim 11 and are therefore believed patentable for at least the same reasons. Since each of these dependent claims is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Applicants submit that this Amendment After Final Rejection clearly places the subject application in condition for allowance. This Amendment was not presented earlier, because Applicants believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 C.F.R. § 1.116.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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